Soil Temperature Sensor

Model: WN34S

https://s.ecowitt.com/B3CJQX

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1. Ecowitt System Introduction

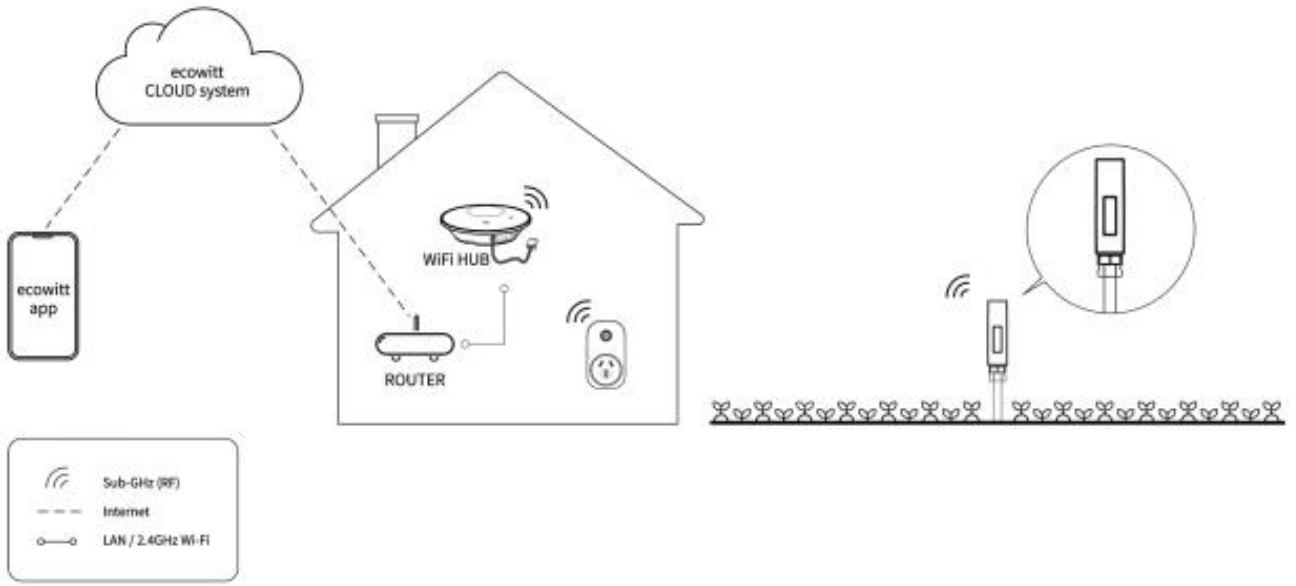

Figure 1 How Ecowitt System Works

Thank you for purchasing this WN34S soil temperature sensor.

Ecowitt is very conscientious about your possible concerns regarding sending your data to the cloud. Not only do we not share your data with any third party, but we also offer you the possibility to manage your data locally with the help of a special tool, the WSview Plus app. You may

refer to this app’s instructions for more details.

Please read this manual and keep it for future reference to ensure the best product performance.

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

One soil temperature sensor
One sensor mounting bracket
One hose clamp for mounting to a pole
One M12 hexagonal screw for mounting
One ST D3.2*M2.0*6 screw for mounting
One user manual

2.2 Features

- Measures temperature with either a 3m (10ft) cable sensor or a 30cm (11.8in) stainless steel probe.
- Wireless range up to 100m (300ft) in open areas.
- Updates every 77 seconds.
- IP66 waterproof rating.
- LCD displays current temperature.

2.3 Overview and Size(Unit:mm/inch)

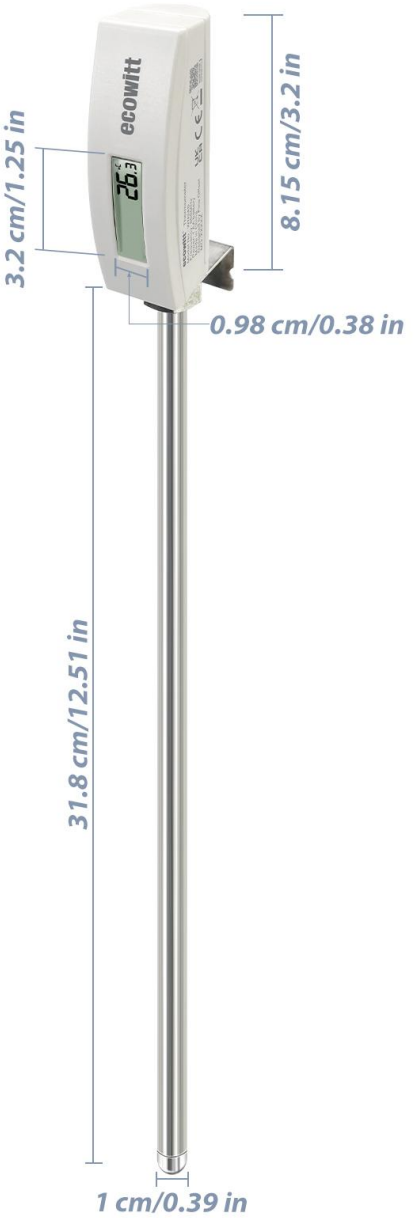

Figure 2 Soil Temperature Sensor

2.4 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 Soil Temperature Sensor

3. 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.

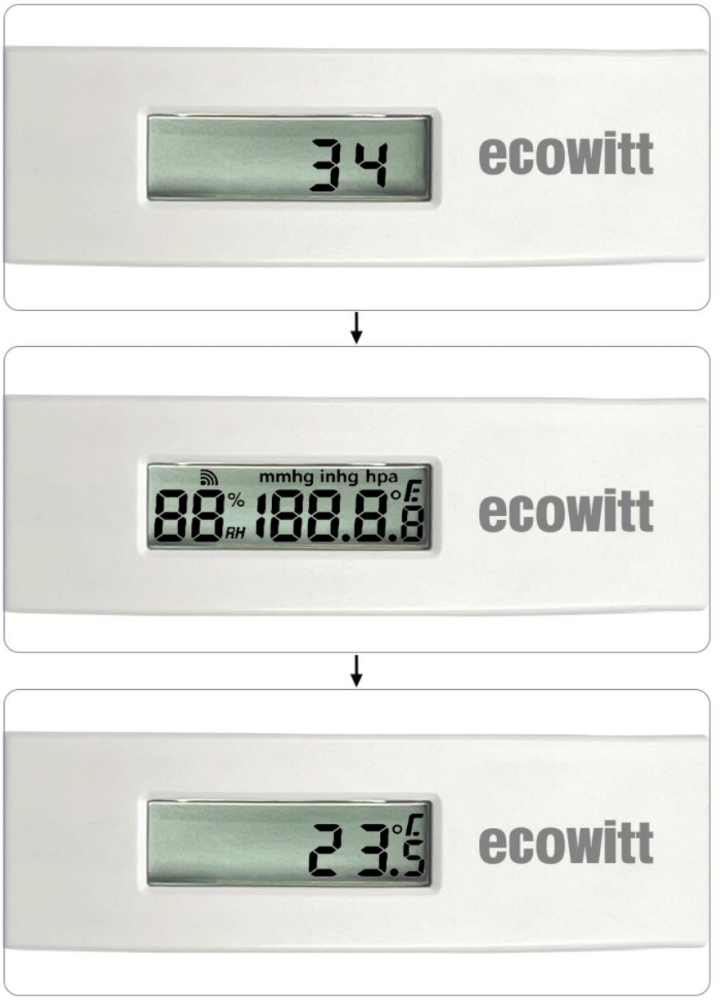

Figure 4

4. 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).

4.1 Pair with the consoles

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

WS38X0		✔	✕
WS39X0		✔	✕
WN1920/1980		✔	✕

Table 1

4.2 Pair with the gateways

Compatible gateways			
			
GW1100	GW2000	GW1200	GW3000

Table 2

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).

4.3 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 2.4 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.

4.4 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.

5. Cloud Upload and Remote Access

5.1 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.

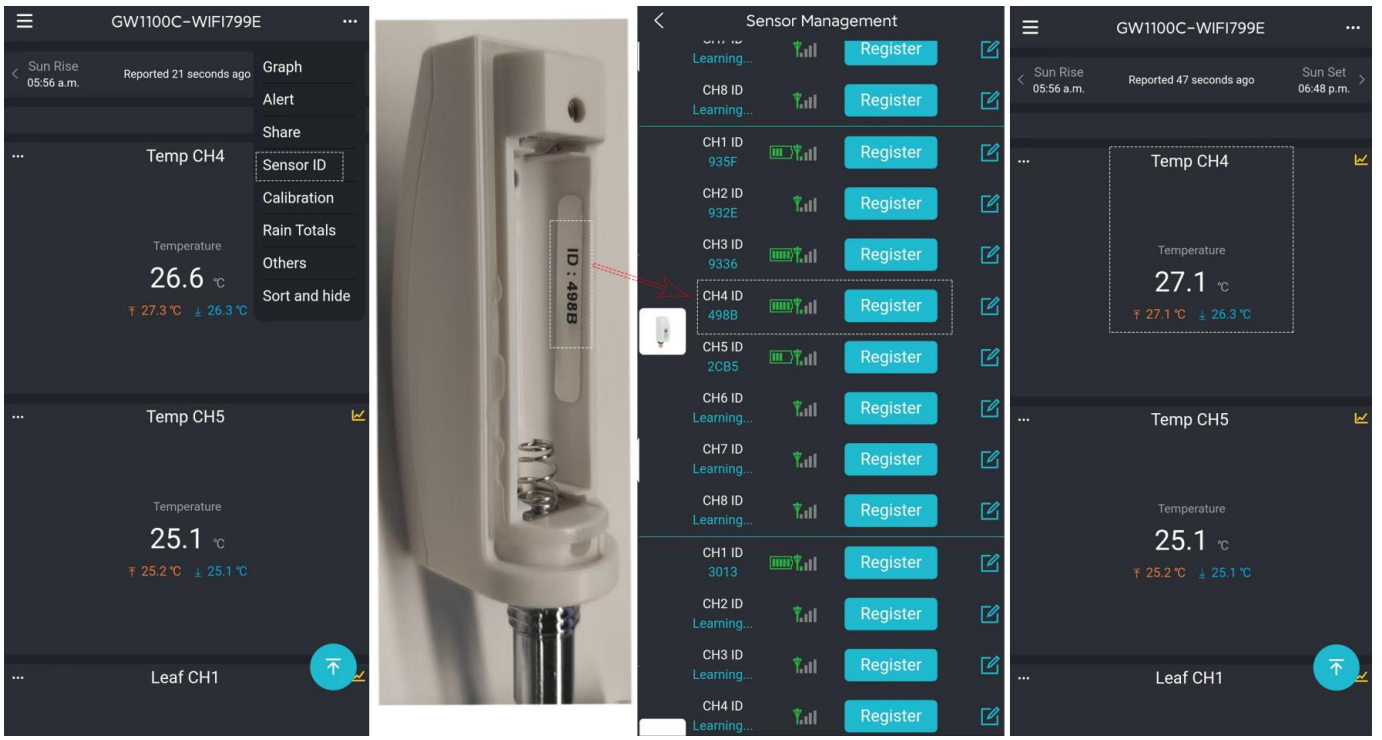

Figure 5

5.2 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.

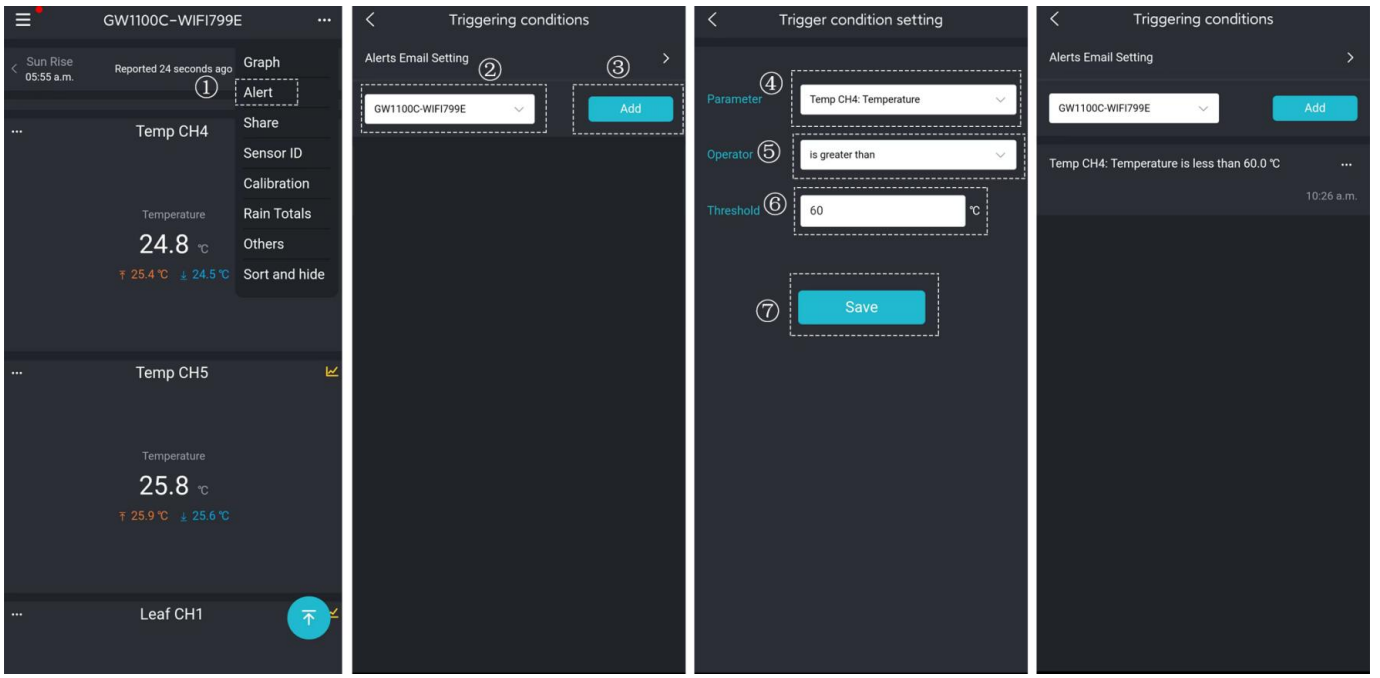

Figure 6

6. Setup Guide

6.1 Installing the battery

Remove the battery door on the back of the transmitter by removing the screw, as shown in Figure 6:

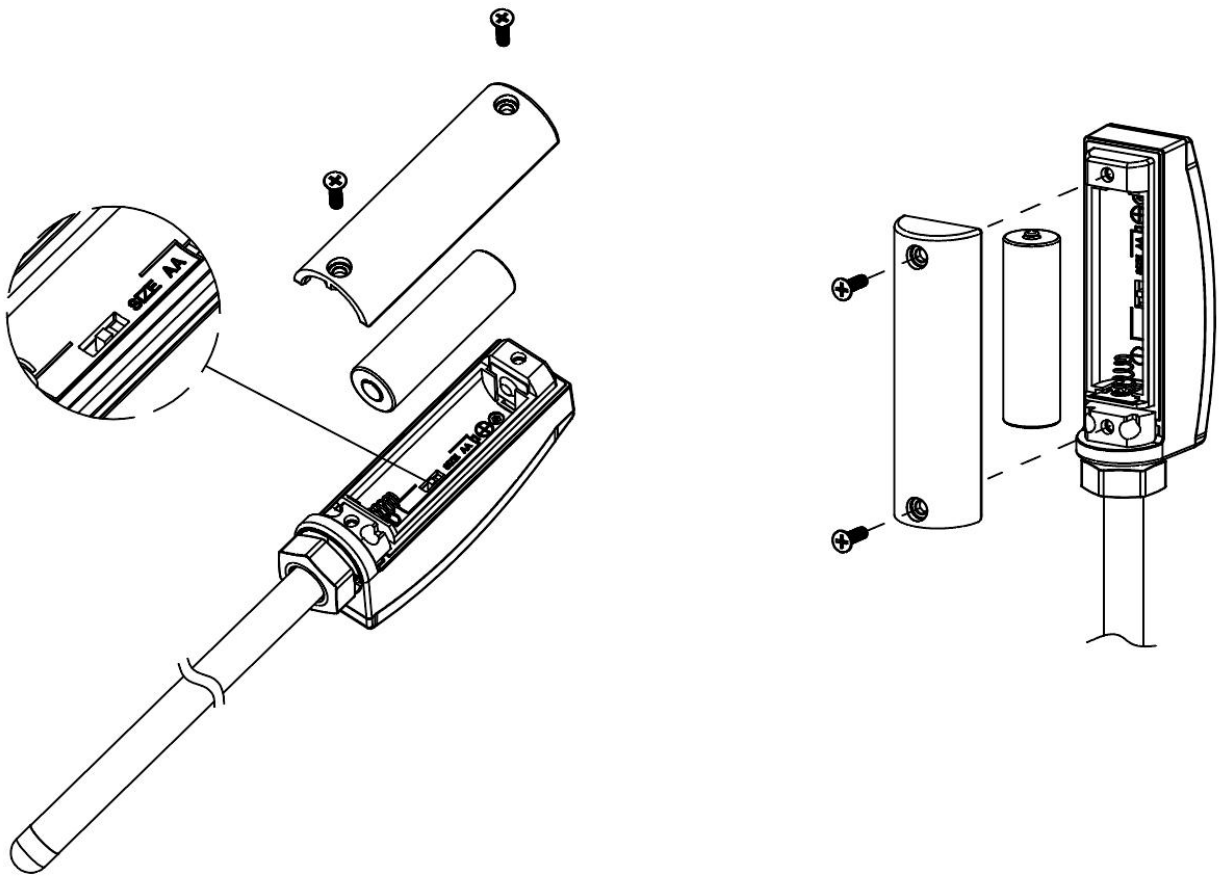

Figure 7 Battery Installation

1. Insert one 1.5V AA battery, ensuring correct polarity (flat side toward the spring).
2. The LCD will display temperature immediately and update approximately every 77 seconds.
3. If the screen remains blank, check battery orientation or try resetting. Do not install the battery in reverse.
4. Close the battery compartment and secure it with the screw.

6.2 Sensor Mounting

To mount the unit on a wall or wooden beam:
Use a screw (Screw ST D3.2*M2.0*6) to fix the bracket on the wall, and then insert the probe through the hole of the bracket, as shown on figure 7:

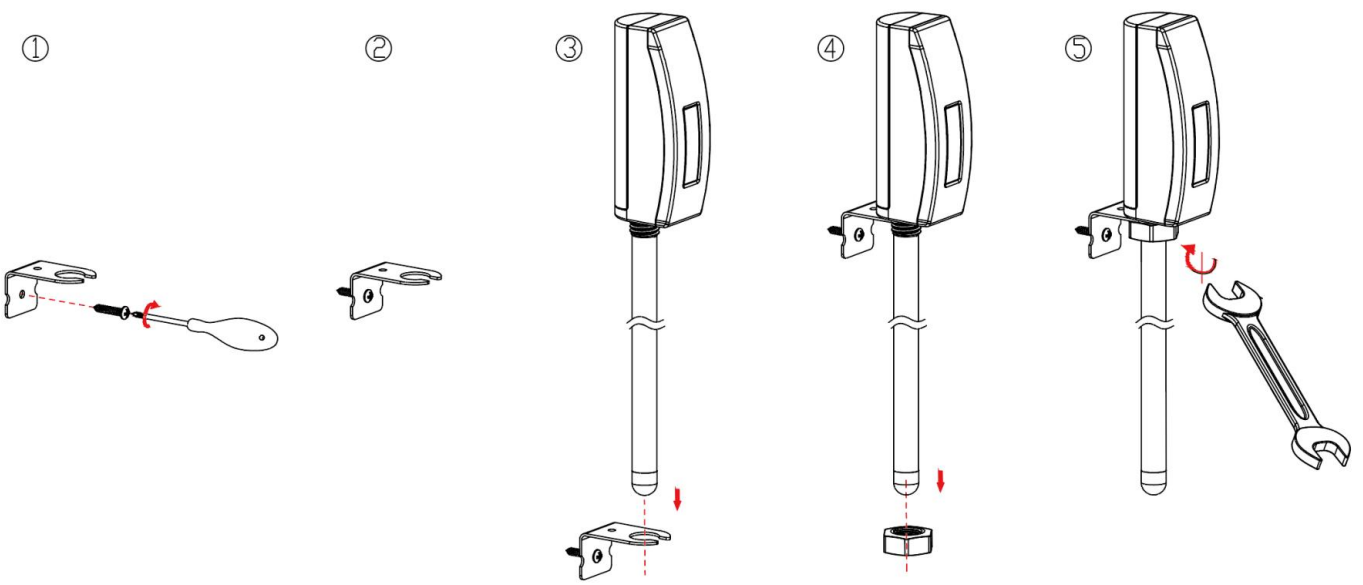

Figure 8 Sensor Mounting

Fix the sensor to the bracket with the Hexagon M12 nut and tighten the screw as shown in Figure 3-2: (Hand turn the nut until firm and then use a wrench to turn 1/3 ~ 1/2 turn and no more. Do not overtighten.

To mount the unit to a pole (not included) with the included hose clamp:

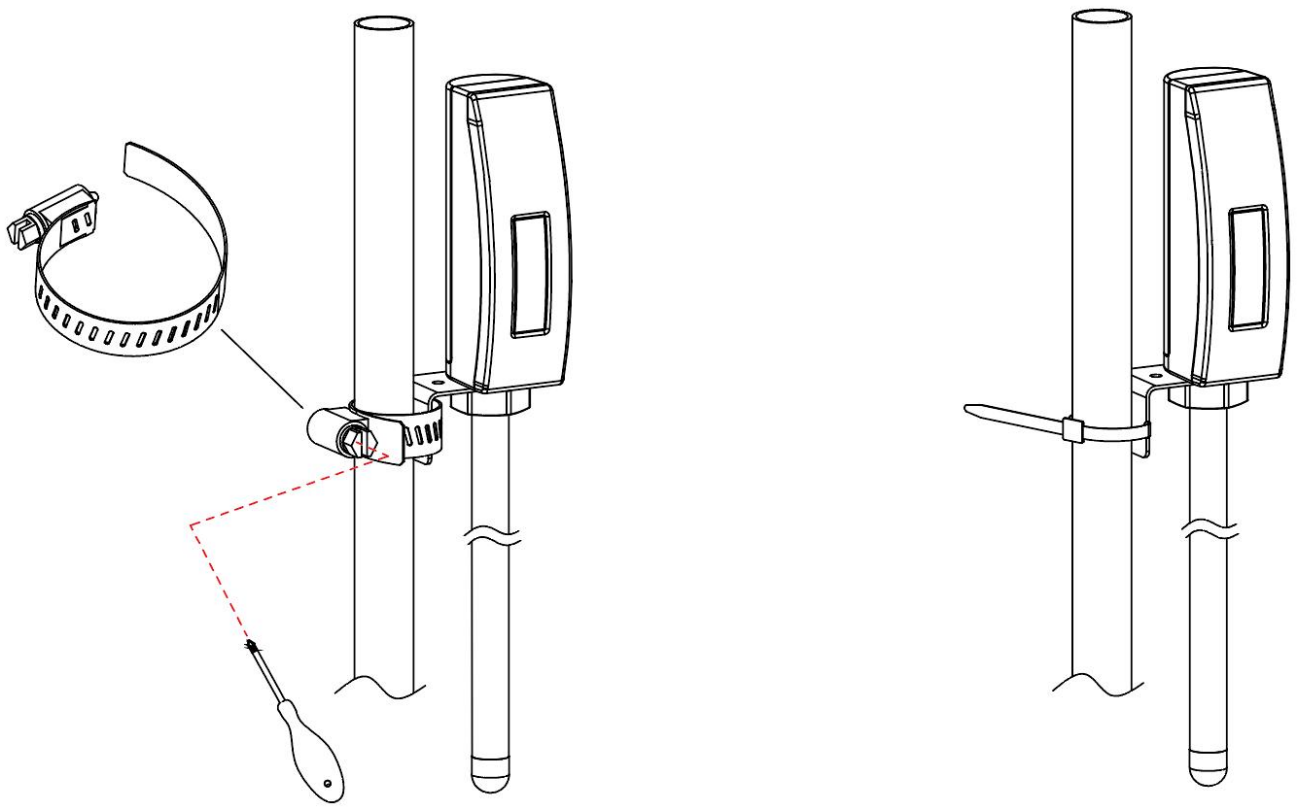

Figure 9 Sensor Mounting to Pole

7. Specification

Model	WN34S
Name	Multi-Channel soil temperature sensor
Main Body Dimensions	400x36.2x25.3(mm)
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	77 seconds
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 Casing	-40°C to 60°C(-40°F to 140°F)
Waterproof Rating	IP66
Power Supply	1 AA Battery (not included)
Battery Life	1 Year

Table 3

8. Warranty & Caution

8.1 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.

8.2 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 Tow n, Baoan District, Shenzhen City, China

9. Contact Us

9.1 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.

9.2 Stay in Touch

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