DP80 Wireless Self-emptying Rain Gauge Sensor

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1. Introduction

Thanks for purchasing this DP80 wireless rain

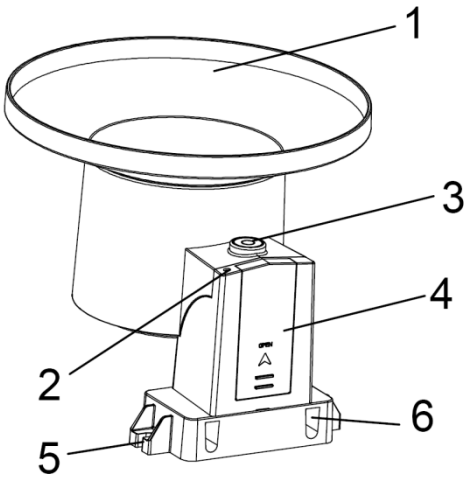
gauge sensor. This device measures rainfall rate, rainfall amount daily, weekly, monthly and yearly. The data can be streamed by froggit DP1500 Wi-Fi Gateway(sold separately) and can be viewed on our WS View mobile application after the Wi-Fi configuration done.
To ensure the best product performance, please read this manual and retain it for future reference.

2. Get Started

2.1 Parts List

One Rain Gauge Sensor(Rain Collector)
One Set of U-bolts for installation
One Stainless Steel Pole
One User Manual

3. Overview



1.Rain collector

2.LED Indicator

3.Bubble level

4.Battery door

5.Screw hole

6.U-bolt install hole

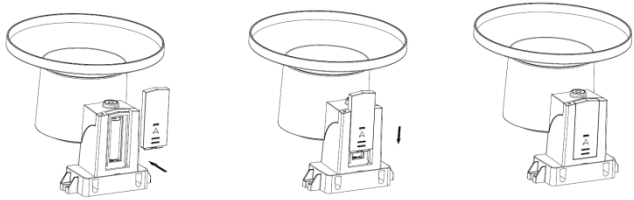
3.1 Features

- Measures rainfall rate, daily, weekly, monthly and yearly data.
- No display, need to work with DP1500 WIFI gateway to complete the WIFI configuration on the WS View App.
- After the WIFI configuration, the live rainfall data can be viewed directly on the WS View App.
- Supports uploads to WU/WeatherCloud/WOW. The rainfall history graph of your WU station ID can be viewed on the WU Dashboard on the WS View App.
- Rain sensor calibration and customized initial rain value functions available on the WS View App.

4. Setup Guide

4.1 Install batteries

Insert 1XAA batteries in the battery compartment. The LED indicator will turn on for four seconds and normally flash once every 49 seconds (the sensor transmission update period).



Note: If no LED light up or is lighted permanently, make sure the battery is inserted the correct way or a proper reset is happened. Do not install the batteries backwards. You can permanently damage the outdoor sensor.

We recommend lithium batteries for cold weather climates, but alkaline batteries are sufficient for most climates. We do not recommend rechargeable batteries. They have lower voltages, do not operate well at wide temperature ranges, and do not last as long, resulting in poorer reception.

5. Mounting

Before you mount

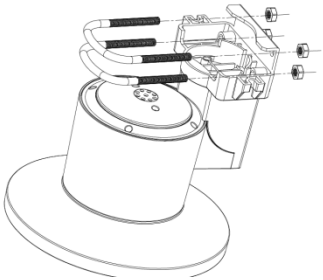
Before proceeding with the outdoor mounting detailed in this section, you may want to skip to WIFI configuration instructions in section 6 and

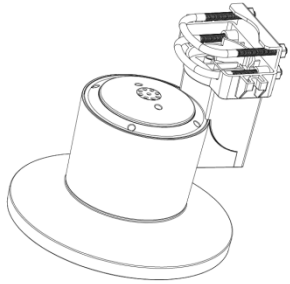
onwards first, while you keep the assembled outdoor sensor package nearby (although preferably not closer than 5 ft. from the gateway). This will make any troubleshooting and adjustments easier and avoids any distance or interference related issues from the setup.

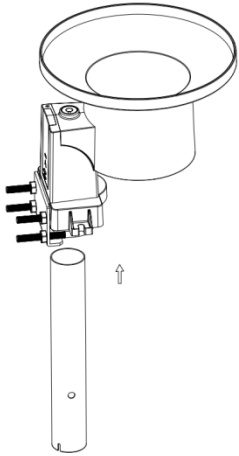
After WIFI configuration is completed and everything is working, return here for outdoor mounting. If issues show up after outdoor mounting they are almost certainly related to distance, obstacles etc.

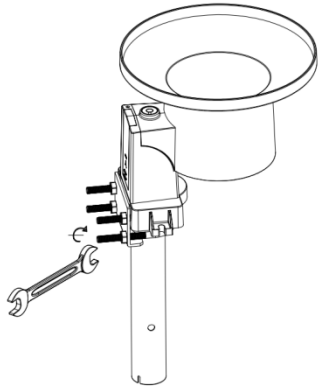
Mount with U-bolts

The mounting assembly includes two U-Bolts and a bracket that tightens around a 1" to 2” diameter pole (package included a D32*H200mm stainless steel tube) using the four U-Bolt nuts.





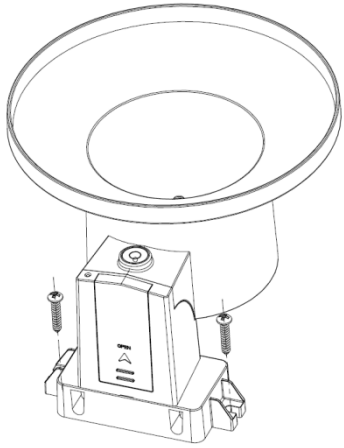




Note: Use the bubble level beside the rain sensor as a guide to verify that the sensor is leveled.

Mount with screws

The mounting assembly also includes two screws for installation on a flat place.



Note: Use the bubble level beside the rain sensor as a guide to verify that the sensor is leveled.

Best Practices for Wireless Communication

Wireless communication is susceptible to interference, distance, walls and metal barriers. We recommend the following best practices for trouble free wireless communication.

1. **Electro-Magnetic Interference (EMI)**.
   Keep the console several feet away from computer monitors and TVs.
2. **Radio Frequency Interference (RFI).**
   If you have other 915/433/868 MHz devices(same frequency with your device) and communication is intermittent, try turning off these other devices for troubleshooting purposes. You may need to relocate the transmitters or receivers to avoid intermittent communication.
3. **Line of Sight Rating.**
   This device is rated at 300 feet(100 meters) line of sight (no interference, barriers or walls) but typically you will get 100 feet(30 meters) maximum under most real-world installations, which include passing through barriers or walls.

4. **Metal Barriers.**
   Radio frequency will not pass through metal barriers such as aluminum siding. If you have metal siding, align the remote and console through a window to get a clear line of sight.

6. Wi-Fi Configure with gateway

This rain sensor doesn't has a display function and you need to use the WS View App to view the rainfall data on your mobile application after pairing this device with our DP1500 Wi-Fi Gateway(sold separately).

Note: If you are testing the setup with the rain sensor nearby and indoor, you may want to consider connecting to Wi-Fi, but not yet configuring any of the weather services. The reason is that the rainfall bucket may be tripped during handling, causing rain to register while it may not actually have been raining. One way to prevent this is to follow all instructions, except to use an incorrect password, on purpose! Then, after final outdoor installation, come back and change the password after clearing data history. That will start uploading to the services with a clean slate.

6.1 Pair with Gateway

If DP1500 has been in operation, and you have never had any rain sensor setup before, just power up rain sensor and DP1500 will pick rain data automatically.

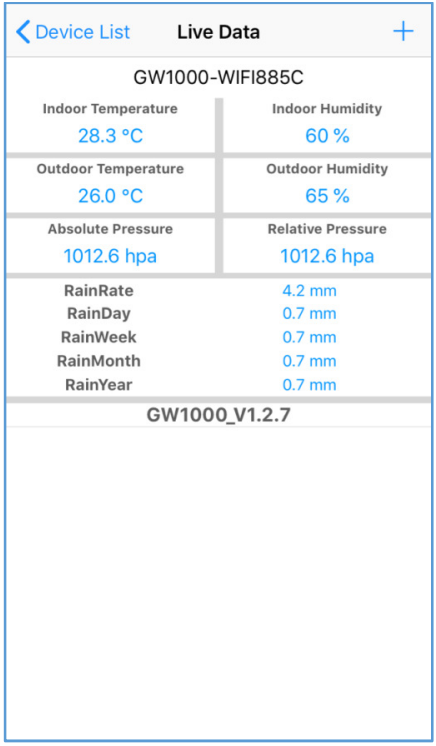
If a rain sensor has been hooked on DP1500 before, and you have a new rain sensor to replace the old one, unplug DP1500 from USB socket and power up again, then the new sensor will be learned and old sensor will be erased.

6.2 Wi-Fi Connection for the Gateway

Go to the manual of the DP1500.

7. View Online Data on WS View

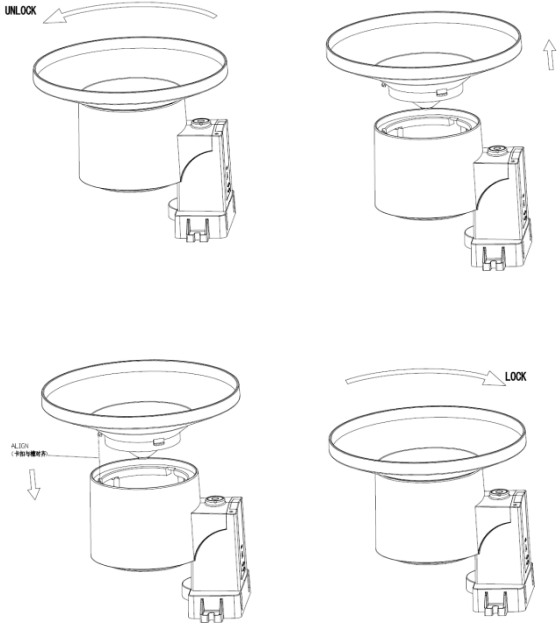
When the Wi-Fi configuration is done, you can view the live data of your rain sensor on the WS View application.



8. Maintenance

1. Clean the rain gauge once every 3 months. Rotate the funnel counter-clockwise and lift to expose the rain gauge mechanism, and clean

with a damp cloth. Remove any dirt, debris and insects. If bug infestation is an issue, spray the array lightly with insecticide.



2. Replace batteries every 1-2 years. If left in too long, the batteries may leak due to environmental challenges. In harsh environments, inspect the batteries every 3 months.

3. When replacing the batteries, apply a corrosion preventive compound on the battery terminals, available at Amazon and most hardware stores.
4. In snowy environments, spray the top of the rain collector with anti-icing silicon spray to prevent snow build up.

9. Specification

Transmission distance in open field: 100m(300 feet)
Frequency: 868 Mhz
Rainfall measuring range: 0--6000mm
Sensor reporting interval: 49 seconds

Power consumption

Rain sensor: 1xAA Alkaline batteries (not included)

General safety instructions
Danger of asphyxiation:
Keep all packaging materials (plastic bags, rubber bands, etc.) away from children. There is a danger of suffocation!
Danger of burns:
Caution! Leaking / leaking battery acid can lead to burns! Avoid contact of battery acid with eyes, mucous membranes and skin. In case of contact, rinse the affected areas immediately with clear water and consult a doctor.
Risk of electric shock:

Children must not be unattended with the device, because the device contains electronic parts which are operated by means of a power source. The device may only be used as described in the instructions. If not, there is a risk of electric shock.

Danger of fire & explosion:

Use only recommended batteries. Never short-circuit the unit or batteries. Never throw the device or batteries into a fire! Overheating and improper handling may result in short circuits which can cause fires and explosions.

Important:

If there is a defect, contact your dealer immediately. Never disassemble the device! The dealer will contact the service department. Never expose the device to water! Protect the device from vibrations. Only use recommended batteries. Never mix batteries - Always replace empty batteries with a complete set of full power batteries. If the unit is not powered for a longer period of time or is not in use, remove the batteries from the unit. The manufacturer accepts no liability for incorrectly inserted batteries!

Notes on the return of batteries according to §12 BatterieVO: Batteries do not belong in the household waste. Please dispose of all batteries as required by law, disposal in

domestic waste is expressly prohibited. Batteries and rechargeable batteries can be dispensed free of charge at municipal collection points or in the shops on the spot.

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WEEE Reg. Nr. 66110125

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