

**DP1100**

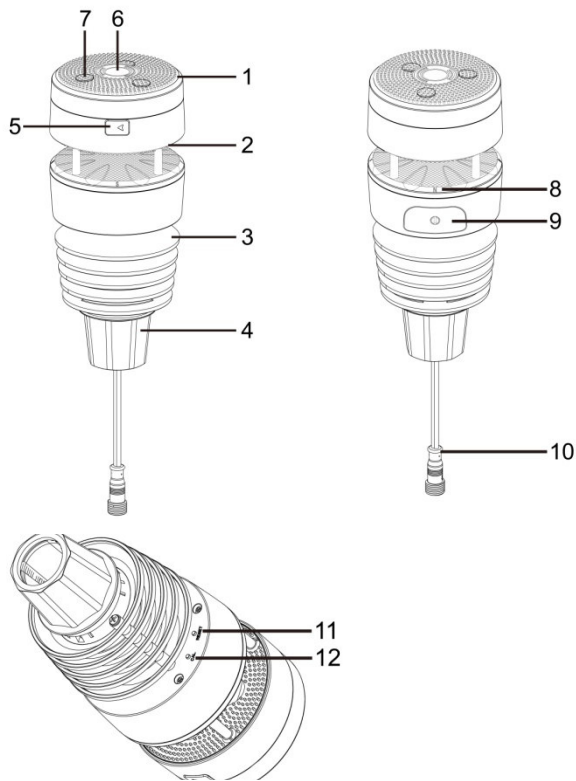
**7-In-1 Ultra solar assistet outdoor**

Manual EN

**froggit.de**

Support/updates/manuals/spare parts:

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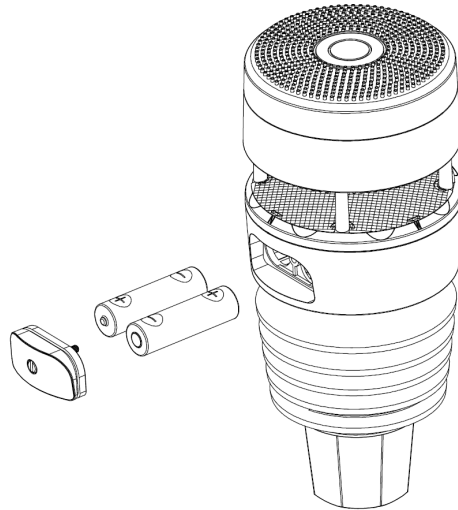
**Figure 2: Wireless Sensor Array**

1. Solar Panel	7. Hapitac Rainfall sensor
2. Ultrasonic wind sensor	8. NORTH alignment indicator
3. Temperature & humidity sensor	9. Battery compartment
4. Fixed Bolt (Mounting on a pole with 1 inch diameter)	10. Heating power cable connector
5. USB port (Factory use only)	11. Reset button
6. Light & UV sensor, LED indicator	12. Calibration button (factory use only)

### **Install batteries in sensor package**

Insert 2XAA batteries in the battery compartment. The LED indicator(on the top of the sensor) will turn on for 3 seconds and normally flash once every 8.8 seconds (the sensor transmission update period).

If sensor has been put outside for some time, and solar panel has charged up the internal accumulator fully or partially, if you install the 2 AA backup batteries, the system might not start up properly. So you can always make a system reset by press the “Reset” button. ?



**Figure 3: Battery installation diagram**

**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

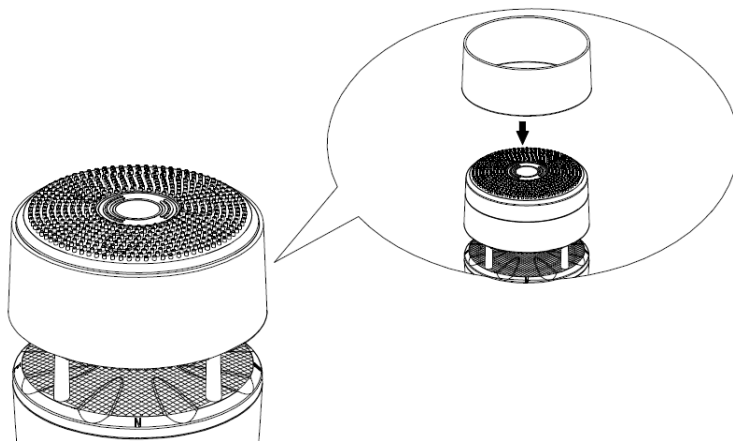
We recommend lithium batteries for cold weather climates, but alkaline batteries are sufficient for most climates. We do not recommend rechargeable batteries. They have lower voltages, do not operate well at wide temperature ranges, and do not last as long, resulting in poorer reception.

### **Mount ultrasonic anemometer with piezoelectric assembly**

#### **Before you mount**

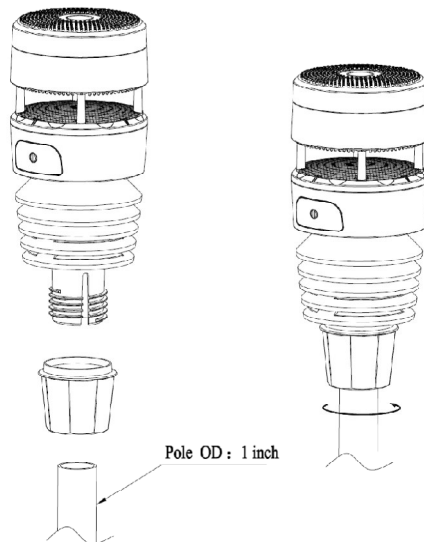
Before installing your outdoor sensor in the permanent location, we recommend operating the device for one week in a temporary location with easy access. This will allow you to check out all of the functions, ensure proper operation and familiarize you with the device performance.

1. Put the white O-ring on the out of the upper part of outdoor sensor array for protection against moisture or water penetrated inside



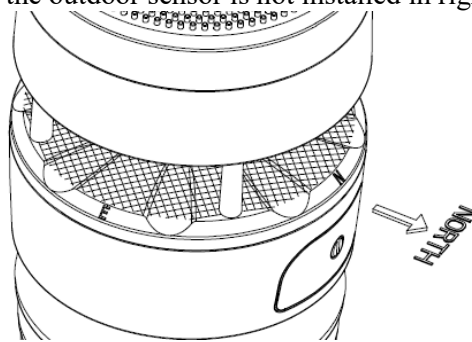
2. Mounting on a pole as Figure 4. Make sure the mounting pole is vertical, or very close to it. Use a level as needed.

**Note:** Supports poles 1" OD



**Figure 4: Sensor mounting diagram**

3. There is an arrow icon with "N" words (Figure 5) representing the direction of North. The sensor body has to be adjusted so that the "N" indication is facing to real north direction in your location. A compass device is recommended to help adjust direction. Permanent wind direction error will be introduced when the outdoor sensor is not installed in right direction.



**Figure 5 Facing North diagram**

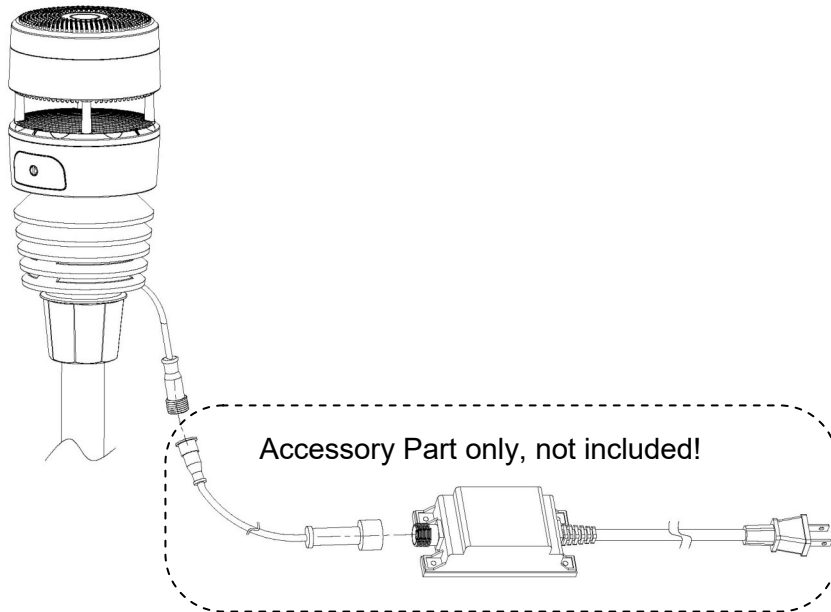
**Note:** In Southern hemisphere, it is not necessary to change the orientation to SOUTH as its solar panel is a rounded type and it is orientation free for its charging capability.

Make sure the mounting tube for the sensor package is installed vertically (use a level at 90-degree offsets around the tube). Adjust the mounting pipe as necessary. Next also make sure the mounting of the anemometer body on the pipe is level. If it is not, wind direction and speed readings may not operate correctly or accurately. Adjust the mounting assembly as necessary.

4. During wintertime, to prevent ice formed on the reflection surface, the optional extension cord be connected to a 12v/1.0A outdoor type power adapter as Figure 6 showed below.

After power by the adaptor, the built-in thermostat heating plate will automatically turns on below 5°C (40°F) and automatically turns off above 10°C (50°F), the heat plate will melts snow and ice and keeps its anemometer working as usual.

**Note:** The outdoor rated adaptor and extended power cable can be purchased separately:



**Figure 6: Sensor package mounting diagram**

### **Reset Button and Transmitter LED**

In the event the sensor package is not transmitting, reset the sensor.

Using a bent-open paperclip, press and hold the **RESET BUTTON** to affect a reset: the LED turns on while the RESET button is depressed, and you can now let go. The LED should then resume as normal, flashing approximately once every 8.8 seconds.

### **Calibration**

The ultrasonic sensor has been calibration before leaving the factory. We do not recommend that customers do calibration by themselves.

Customers use this feature only when the wind speed does not return to zero when there is no wind

After the product works normally, use a cloth or sponge with good water absorption (prevent the echo of the ultrasonic waves) to completely wrap the air inlet.

With an open ended paperclip, press and hold the CAL button for three seconds, the top LED light will be on. After releasing the CAL button, place the product on the table. After five seconds, the top LED light will flash. At this time it is in the calibration mode. Wait for the LED to flash, the calibration is over, and the product automatically enters the normal working mode.

## 8. Specifications

**Note:** Out of range values will be displayed using “---”:

Outdoor sensor	Specification
Transmission distance in open field	100 m (450 ft.)
RF Frequency	868MHz
Temperature range	-40°C – 60°C (-40°F - 140°F)
Temperature accuracy	± 0.3°C, or ± 0.6°F
Temperature resolution	0.1°C, or 0.1°F
Humidity range	1% ~ 99%
Humidity accuracy	±3.5%
Humidity resolution	1%
Rain volume display range	0 – 9999 mm
Rain volume accuracy	± 10%
Rain volume resolution	0.1mm/0.01inch
Wind speed range	0 – 40 m/s (0 ~ 89mph)
Wind speed accuracy	<10m/s, +/-0.5m/s ≥10m/s, +/-5%
Wind direction accuracy	<2m/s, ±10° ≥2m/s, ±7°
UV-Index range	0 - 15
Light range	0 – 200 kLux
Light accuracy	± 15%
Sensor reporting interval	8.8s
Power	Solar panel (built-in) 6.5V/4mA
	2 x AA 1.5V battery (not included)

**Table: Outdoor sensor specification**

The primary power source for the outdoor sensor is the solar panel. When available solar power (light over recent period) is insufficient, the batteries will be used. In outdoor climates that frequently have sustained temperatures below 0°C (or 32°F) the use of Lithium batteries is strongly suggested as these are performing better than Alkaline batteries under such circumstances.

### **Caution !**

This booklet may contain errors or misprints. The information is regularly checked and corrections are included in subsequent editions.

We disclaim any responsibility for any printing error, or their consequences.

The specification of this product may change without prior notice.

### **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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**declaration of conformity**

Hereby we declare, HS-Group GmbH & Co.KG, Escherstr. 31, 50733 D-Cologne, that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

The declaration of conformity for this product can be found at: [www.froggit.de](http://www.froggit.de) or on request.