

## User Guide

### Introduction

The outdoor weather station can connect to various RS485 sensors, including temperature and humidity, wind speed, wind direction, rainfall, solar radiation, CO<sub>2</sub>, noise, PM, barometric pressure, soil temperature and moisture, soil EC, and soil pH. Sensor combinations can be customized according to user requirements. The pole is made of galvanized steel pipe, providing excellent resistance to rain, rust, and corrosion for long-term durability. It can be equipped with a solar panel and battery for outdoor measurement without the need for an external power supply. An optional large LED display screen offers clear, real-time data visualization.



### Applications

This product is suitable for outdoor air quality monitoring, greenhouse environments, and construction site dust monitoring and other scenarios.

### Features

- Flexible sensor configuration
- Weatherproof and corrosion-resistant for long-lasting use

### Specification

Specification	
Model	UB-WS-A1
Pole Height	1.5 m / 2 m / Customizable
Pole Diameter	76 mm / 114 mm
Pole Material	Galvanized Steel Pipe
Installation Method	Adjustable Cross Arm

### Note

1. Before installation, ensure that the base is properly secured by pre-embedding an anchor cage or installing anchor bolts in advance.
2. Route sensor cables inside the pole to prevent exposure to direct sunlight and damage by birds.
3. Mount the GPRS antenna on the outside of the waterproof enclosure to ensure stable signal reception.
4. If using a solar panel, make sure there are no surrounding obstructions. Position the panel facing south at a 45° angle to the ground.

### Optional

1. LED Display: Must support RS485 communication and comply with the specified protocol format.
2. Solar Power Supply: It is recommended that the solar panel provide at least 40 W / 18 V. The battery system should use a ternary lithium battery with a capacity of at least 20 Ah and an output of DC 12 V, min 2 A. The output interface should be DC5521 for connection to GS1 series devices.