

# Ultrasonic weather station

Model ES-W5004S



## Introduction

ES-W5004S is a highly integrated instrument designed for meteorological monitoring needs across multiple fields. Featuring an integrated design, it can simultaneously perform 24-hour continuous online monitoring of eight meteorological parameters: atmospheric temperature, humidity, wind speed, wind direction, atmospheric pressure, rainfall, illuminance, and total radiation. All data is output in a single pass via a digital communication interface.

The product utilizes ultrasonic wind measurement technology and radar rainfall measurement technology. With no moving parts, it requires minimal maintenance and is suitable for long-term unattended operation.

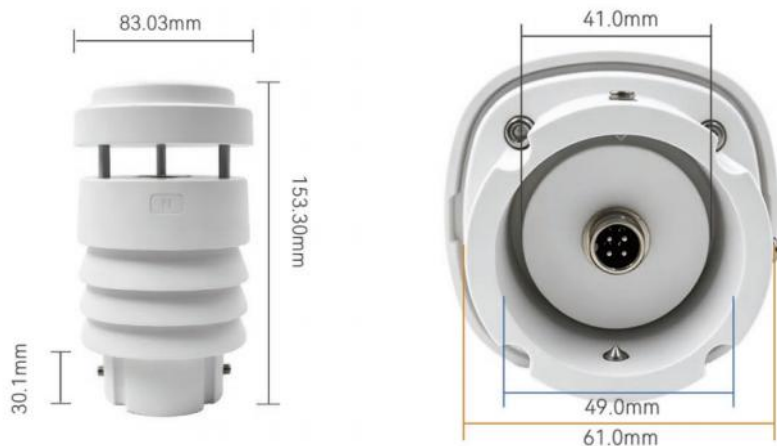
## Main features

- Miniaturized, integrated design
- High integration, eight parameters output per device
- No moving parts, maintenance-free
- Radar shield uses special heat insulation technology
- Support extended parameter

Application Areas: Meteorological monitoring, micro-environmental monitoring, grid-based environmental monitoring, agricultural meteorological monitoring, traffic meteorological monitoring, photovoltaic environmental monitoring, wind power meteorological monitoring

## Dimension

Unit:mm



## Application

- Meteorological monitoring
- Micro environmental monitoring
- Grid environment monitoring
- Agrometeorological monitoring
- Traffic meteorological monitoring
- PV environmental monitoring

## Specification

ITEMS	Range	Accuracy	Resolution	Sampling frequency
Wind speed	0-60m /s	± (0.5+0.05V) M/S	0.01m/s	4Hz
Wind direction	0-359.5°	± 5 ° (@ 10m/s)	0.1°	4Hz
Air temperature	- 40 °C - + 85 °C	±0.3°C	0.01 °C	1Hz
Air Humidity	0-100%RH	± 3% RH (10% - 80% RH, no condensation)	0.01%RH	1Hz
Atmospheric pressure	500 -1100hPa	±0.5hPa (25°C, 950-1100hPa)	0.1hPa	1Hz
Illumination	0-100KLux	±3%	10Lux	1Hz
Solar radiation	0-1500W/m <sup>2</sup>	±5%	1W./m <sup>2</sup>	1Hz
Rainfall	0-200mm/h	±10% (wind speed ≤ 5 m/s)	0.01mm	1Hz
Working temperature	-20°C~60°C			
Output signal	Default RS485, ModbusRTU; Customizable SDI-12			
Max. output frequency	Passive mode: 1/S, Active mode: 1/min			
Power supply	DC9-24V			
Protection level	IP65			
Fixing method	Default fixed by sleeve (Flange fixing or bending plate fixing optional)			
Optional protocol	NMEA, ASCII (compatible with Vaisala), CAN (ASCII)			
Cable	Default 3m cable (other length optional)			

## Order guide

ES-W5004S	Ultrasonic weather station		
	CODE	Function type	
	XXXXX	W1= wind speed W2 = wind direction R = rainfall	T = temperature H = humidity L =Luminance
		CODE	Signal output
		1	RS232
		2	RS485
		3	SDI-12
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