

# Ultrasonic weather station

Model ES-W5000Z



## Introduction

ES-W5000Z is innovatively realizes the six meteorological standard parameters (T,RH,P,WD,WDIR,Rianfall) through a highly integrated structure, which can realize the 24-hour continuous online monitoring of outdoor meteorological parameters, and output the six parameters to the user at one time through the digital communication interface. In addition, It can be expanded to increase other meteorological and environmental parameters (AQI six parameters: CO, NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>).

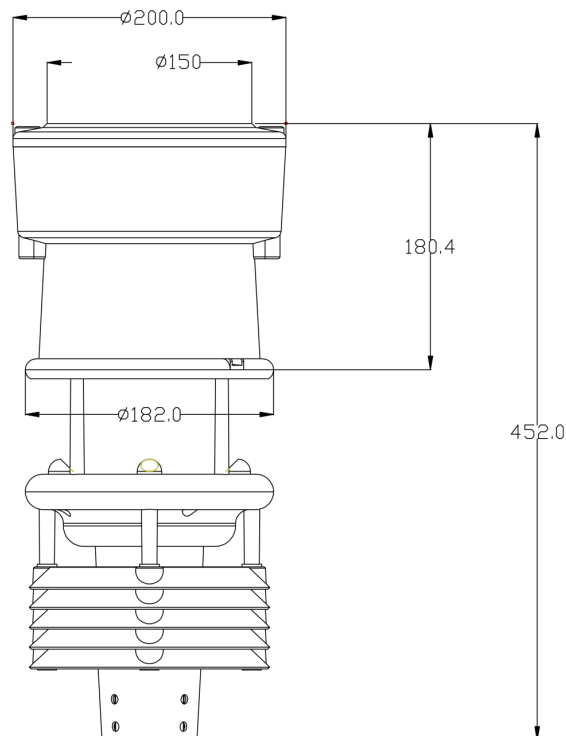
They can be widely used in urban environmental monitoring, wind power generation, meteorological monitoring, Bridges, tunnels, ships, aviation airports, agricultural meteorology, water conservancy meteorology, power environment, highway meteorological monitoring and other fields. No maintenance and on-site calibration is required.

## Main features

- Standard configuration monitoring T/RH/P/WD/WDIR, RS485(MODBUS)
- High precision, reliable performance, suitable for outdoor weather harsh environment
- Real-time monitoring of meteorological environmental data, low cost, suitable for grid distribution
- Small size, modular design, flexible layout
- Optional GPS positioning, device tracking function
- Data acquisition adopts 32-bit high-speed processing chip, stable and anti-interference.

## Dimension

Unit:mm



## Specification

ITEMS	Principle	Range	Resolution	Accuracy
Wind speed	Ultrasonic	0-60m /s	0.01m/s	(0-30m/s)±0.3m/s or ±3% (30-60m/s) ±5%
Wind direction	Ultrasonic	0-360 °	0.1°	±2°
Temperature	MEMS	- 40 °C - + 60 °C	0.1 °C	± 0.3°C(@25°C, typical case)
Humidity	MEMS	0 – 100%	0.1%RH	±3%RH (0-90%RH)
Atmospheric pressure	MEMS	300 – 1100hPa	0.1hpa	±0.5hpa(0-30°C)
Rainfall	Photology	0-200mm/h	0.2mm	Error<5%
PM2.5/PM10*	Laser	0-1000ug/m³	1ug/m³	10ug±10%@0-500ug/m³
Optional gas functions*	CO,NO2,SO2,O3,H2S,TVOC			
Digital output	RS485(Modbus)			
Power supply	12-24VDC, solar power			
IP protection	IP66			
Fixed form	A) Sleeve fixed; B)Flange adapter fixed			
Power consumption	<1W@12V			
Mounting frame	1.5m, 3m Flange, 1.8m tripod			
Material	ASA+engineering plastics			
GPS	Device tracking and positioning			
Data release	PC、Telephone APP、LED、LCD TV display, etc			

## Order guide

ES-W5000Z	Ultrasonic weather station		
	CODE	Function type	
	XXXXXX	W1= wind speed W2 = wind direction R = rainfall	T= temperature H = humidity L =Luminance A= atmospheric pressure P=PM1.0/PM2.5/PM10 Optional gas functions
		CODE	Signal output
		1	RS232
		2	RS485
		3	SDI-12
ES-W5000Z	W1W2THA	2	Order example