

Ultrasonic Rainfall Anemometer

Model ES-W303R



Introduction

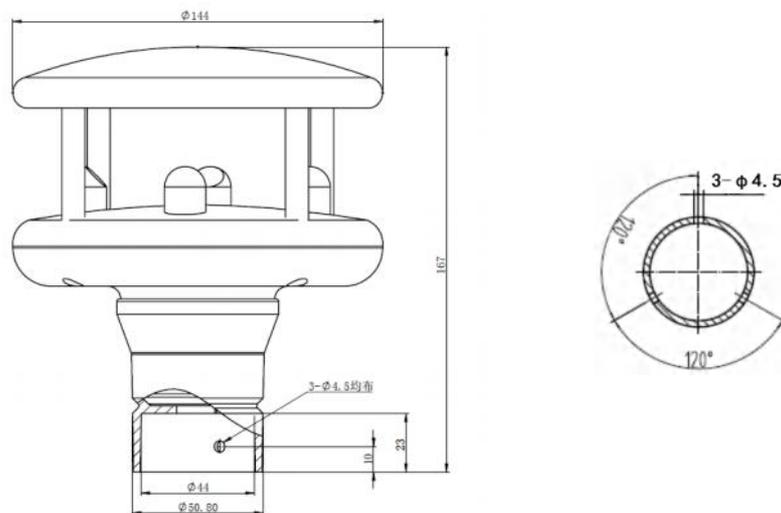
ES-W303R Ultrasonic rainfall anemometer is a kind of instrument which can measure the wind speed, wind direction and acoustic temperature by using the time difference of ultrasonic propagation in the air which also integrated the radar rain sensor and air pressure sensor. Compact space structure makes the volume smaller and the appearance more beautiful; all aluminum alloy shell makes the weight lighter; integral heating can work normally in cold and frozen weather. It is recommended for wind power, tunnels, high-altitude buildings and other fields.

Application

It is mainly used in highway, meteorology, drilling platform, waterway, port, wind power generation, ship, automatic weather station and other industries.

Dimension

Unit:mm



Main features

- Moving parts, zero wear
- Maintenance-free, long service life
- Engineering plastic or aluminum alloy shell
- Using ultrasonic probe reflection type
- Using sound wave phase compensation technology
- Built-in three-axis electronic compass
- 3D acceleration module can provide stable longitudinal and lateral sway data in motion

Compliance

The electromagnetic compatibility in accordance with the following applicable directives:
 LVD 2014/35/EU Low Voltage
 EMC 2014/30/EU
 Electromagnetic Compatibility
 EMC 2014/35/EU
 Electromagnetic Compatibility

Specification

Wind speed	Range	0 - 60m/s (customizable 0 - 75m/s)
	Accuracy	±2%
	Resolution	0.01m/s
	Unit	m/s,km/h,knots,mph,ft/min (selectable)
Wing direction	Measure Range	0-359°
	intersection angle with geographic north	0-359°
	Accuracy	±3°
	Resolution	1°
Rain sensor	Principle	24G radar
	Measure Range	0-200mm/hour
	Resolution	0.1mm
	Measurement type	Rain/Snow/Hail
Digital output	Interface	RS232/RS485
	Baud rate	9600(default),1200-19200(configurable)
	Frequency	Standard: 1Hz, Customized:4Hz
	Protocol	ModBus-RTU/NMEA 0183
Protection grade	IP65 (with the cable connected), IP67/68 customized	
Operating Temp./Humidity	-40°C ~ +70°C, 0 - 100%	
Power supply	DC 12~24V DC	
Size/Weight	Φ140×183mm / 0.78kg	
Body material	ABS engineering plastic	
Air pressure*	Capacitive MEMS sensors/Range: 150 – 1100hPa /Resolutions: 0.1hPa/ accuracy: ±1 hPa	
Longitude and latitude*	Positioning global longitude and latitude coordinates	
Height*	The average sea level at which the instrument is located	
Movement speed*	Instrument movement speed, in knots or meters per hour	
Moving heading angle*	The angle between the instrument's moving direction and the North Pole of the Earth, clockwise, with a maximum of 359.9 degrees	

* Represent for optimal functions

Order guide

ES-W303R	Ultrasonic Wind Speed & Direction Sensor		
	CODE	Function type	
	A	Wind speed + wind direction +rain sensor	
	B	Wind speed + wind direction +rain sensor + atmospheric pressure	
	C	Wind speed + wind direction +rain sensor + electronic compass	
	D	Wind speed + wind direction +rain sensor + atmospheric pressure+ electronic compass	
		CODE	Signal output
		1	RS232
	2	RS485	
ES-W303R	A	1	Order example