PRODUCT OVERVIEW

Ultrasonic weather station

Model ES-W1002

Main features

- Supports measurement of multiple parameters, integrated design
- The transducer is inverted, waterproof and dustproof
- No startup wind speed limit, works at zero wind speed
- No angle limit, 360° all-round measurement
- High-quality ABS anti-ultraviolet material, long service life
- Key components use imported devices, accurate measurement
- Built-in electronic compass, no direction requirements

Compliance

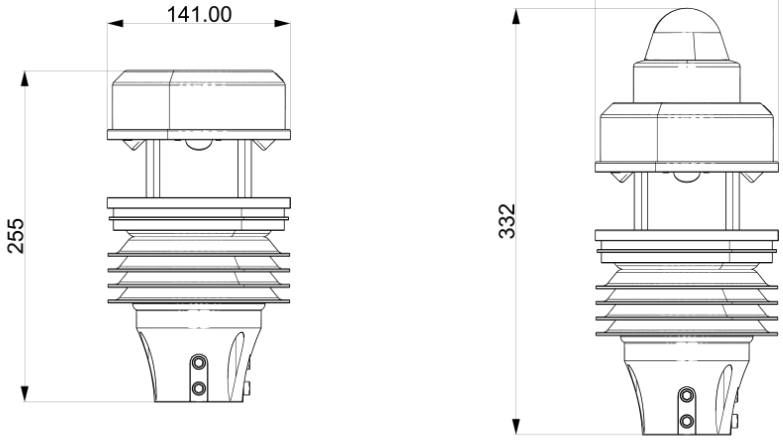
The electromagnetic compatibility in accordance with the following applicable directives:
LVD 2014/35/EU Low Voltage
EMC 2014/30/EU Electromagnetic Compatibility
EMC 2014/35/EU Electromagnetic Compatibility

Introduction

ES-W1002 integrated weather station can be widely used in environmental detection, integrating wind speed, wind direction, temperature and humidity, noise collection, PM2.5 and PM10, CO2, atmospheric pressure, and light. The equipment adopts standard ModBus-RTU communication protocol and RS485 signal output. The communication distance can reach up to 2000 meters. The data can be uploaded to the customer's monitoring software or PLC configuration screen through 485 communication, and it also supports secondary development.
The equipment with built-in electronic compass selection no longer has the requirements of orientation during installation, and only needs to ensure horizontal installation. It is suitable for use in mobile occasions such as marine ships and automobile transportation, and there is no direction requirement during installation.
It is widely used in various occasions where it is necessary to measure environmental temperature and humidity, noise, air quality, CO2, atmospheric pressure, light, etc. It is safe and reliable, easy to install, and durable.

Dimension

Unit:mm



Tel: +86 28 87436908
Tax: +86 28 60253688
www.ecosentec.com
Email: info@ecosentec.com

Specification

ITEMS	Range	Accuracy	Response time	Long stability
Wind speed	0-60m /s	±(0.2m/s±0.02*v)(v is the actual wind speed) (60%RH, 25°C)	1S	-
Wind direction	0-359 °	±3°（60%RH,25°C)	1S	-
Temperature	- 40 °C - + 80 °C	±0.5°C（25°C)	≤25s (1m/s wind speed 2)	≤0.1°C/y
Humidity	0－99%	±3%RH(60%RH,25°C)	≤8s (1m/s wind speed 2)	≤1%/y
Atmospheric pressure	0 － 120KPa	±0.15kPa@25°C 101kPa	≤2S	-0.1kPa/y
Luminance	0-200000lux	±7%(25°C)	≤2S	≤5%/y
Solar Radiation	0-1800 W/m2	⩽±3%@150W/m²	≤10S	≤±3%
PM2.5/PM10	0-1000μg/m3	±3%FS（@100μg/m3、25°C、50%RH)	≤90S	≤1%/y
CO2	0-5000ppm	±(50ppm+ 3%F·S) (25°C)	≤90S	≤1%/y
Noise	30-120 dB	±0.5dB	≤3S	≤3dB/y
Optical rainfall	Typical accuracy: ±5%; Resolution: standard 0.1mm; Maximum instantaneous rainfall: 24mm/min; Rain sensing diameter: 6cm			
Digital output	RS485			
Power supply	VDC: 10V-30V			
Power Consumption	1.2W			
IP protection	Default IP65			
Operating environment	-40°C - +70°C,0 - 100%			
Material	White/ABS			

Order guide

ES-W1002	ultrasonic weather station			
	CODE	Function type		
	XXXXX	W1= wind speed W2 = wind direction R = rainfall N=Noise	T= temperature H = humidity L =Luminance C=CO2	A= atmospheric pressure S1 = Solar radiation P=PM1.0/PM2.5/PM10
		CODE	Signal output	
		1	No built-in electronic compass	
		2	Built-in electronic compass function	
ES-W1002	W1W2THA	1	Order example	

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