

Ultrasonic Anemometer and Wind Direction Sensor

» Product Introduction

HY-WDSS2E is a high-precision two-dimensional ultrasonic anemometer that measures wind speed and direction based on the principle of the time-of-flight difference of ultrasonic waves in air. It features a stainless steel and aluminum alloy housing with an anodized finish and an IP65 protection rating, ensuring a highly robust structure.



It features a built-in intelligent, high-power heating module that ensures normal operation even under extreme cold and freezing conditions at high altitudes. It is characterized by high accuracy and fast response times.

» Key Features

- Rugged, durable housing design; easy to install; all-weather measurement
- No moving parts; maintenance-free
- Modbus communication protocol, standard RS485/RS232 output
- Internal heating element with a maximum heating power of 120W
- Export average wind and gust data in accordance with the requirements of the World Meteorological Organization



Technical Indicators

Project	Range	Accuracy	Resolution
Wind Speed	0-60 m/s（Can be expanded to 75m/s）	±（0.5 m/s + 0.03×V）	0.01 m/s
Wind Direction	0-360°（0° and 360° coincide）	±3°（V ≥ 1 m/s）	1°
Output frequency	1 Hz（4 Hz Optional）		
Units of Measurement	m/s，knots，mph，kph，ft/min		
Average and Gusts	Rolling Max,Min,Average：2 min/10 min；Gust;		
Digital/Analog Output Interface	RS232、RS485、SDI-12（Choose one）/ 2 × 4-20 mA Current output		
Baud rate	1200 — 115200		
Protection	IP65		
Operating Temperature	-50℃ — +80℃		
Electromagnetic Shielding	EN61000-6-2 standard		
Storage Temperature/Humidity	-40℃ — +80℃ / 0 — 100%RH		
Power Requirements and Power Consumption	Wind Speed, Wind Direction：DC12-24V（15 mA@12V）/Heating DC24V（3A/8A@12V）		
Size/Weight	Φ288 × 160 mm/1.13 kg		
Materials	Stainless Steel + Aluminum Alloy		

Product Showcase



