

ULTRASONIC ANEMOMETER

The Ultrasonic Anemometer is a high-performance, solid-state wind sensor designed for precision measurement of wind speed and direction without any mechanical moving parts. Utilizing advanced ultrasonic Time-of-Flight (TOF) technology, it ensures reliable, maintenance-free operation in a wide range of environmental conditions. Housed in a rugged, corrosion-resistant polycarbonate enclosure, this compact and lightweight sensor is ideal for IoT integration, weather monitoring, smart agriculture, UAVs, and industrial applications.



Key Features

- Non-Contact Measurement:** No moving parts ensure long-term reliability and reduced maintenance.
- High Accuracy & Resolution:** Delivers precise wind data with minimal error margins.
- Wide Operating Range:** Suitable for both indoor and outdoor environments.
- Real-Time Data Output:** Compatible with IoT platforms for live monitoring and analytics.
- Robust Construction:** IP66-rated housing resistant to dust, water, and UV exposure.
- Low Power Consumption:** Optimized for continuous operation in remote or solar-powered setups.

Technical Specifications

Wind Speed	
Parameter	Value
Range	0 – 60 m/s
Accuracy	±0.1 m/s – ±0.2 m/s
Resolution	0.01 m/s
Response Time	0.25 – 5 seconds

ULTRASONIC ANEMOMETER

Wind Direction	
Parameter	Value
Range	0° – 360°
Resolution	1°
Response Time	0.25 – 5 seconds

Electrical Specifications	
Parameter	Value
Supply Voltage	2V – 16V DC
Power Consumption	30mA – 60mA
Output Interface	RS232 or RS485

Environmental Ratings	
Parameter	Value
Ingress Protection	IP66
Operating Temperature	-40°C to +70°C

Pinout / Wiring	
Wire Color	Function
Red	VCC (2V-16V DC)
Black	GND
Blue	A (RS232) / RX (RS485)
Yellow	B (RS232) / TX (RS485)

ULTRASONIC ANEMOMETER

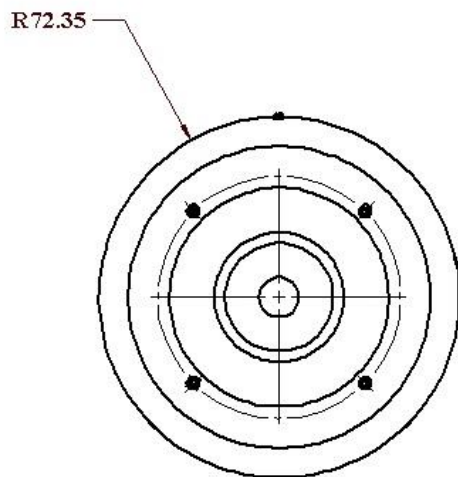
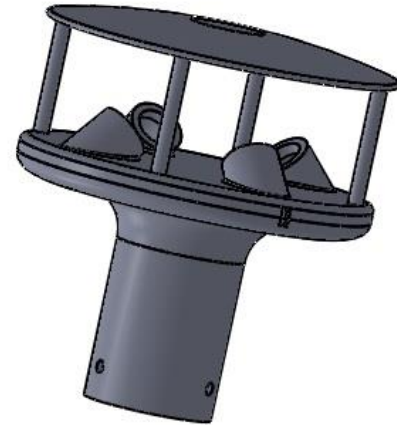
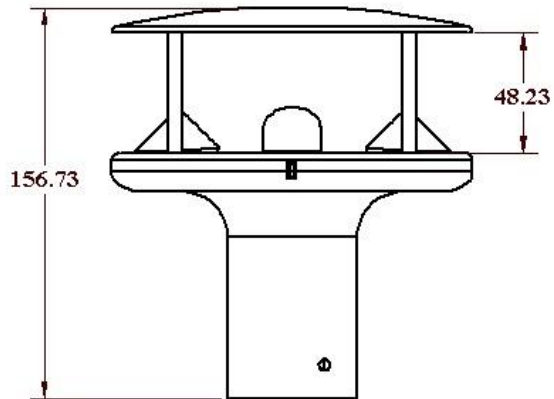
Applications

- Meteorological and weather monitoring stations
- Smart farming and precision agriculture
- IoT-based environmental sensing networks
- UAVs and drones for in-flight wind analysis
- Industrial ventilation and airflow systems
- Small airports, helipads, and wind energy projects

Mechanical Specifications

Property	Value
Housing Material	UV-stabilized Polycarbonate
Protection Rating	IP66 (dust and water resistant)
Dimensions	157mm (H) × 73mm (Ø)
Weight	0.6 kg
Color	Black (reduces solar absorption)
Mounting	Pole mount with stainless bracket
Cable Connection	4-pin waterproof connector
UV Resistance	> 5 years outdoor exposure

ULTRASONIC ANEMOMETER



ULTRASONIC ANEMOMETER

(All The Dimensions Are In mm)