



MECHANICAL WIND SPEED SENSOR



Introduction

The mechanical wind speed sensor works on the principle that wind kinetic energy drives internal mechanical components (wind cups) to rotate, and calculates real-time wind speed based on the corresponding relationship between rotation speed and wind velocity.

It consists of a wind cup assembly, rotating shaft, and counter or signal conversion module. Driven by wind force, the wind cups rotate; the rotating shaft transmits mechanical motion to the internal unit, which is finally converted into electrical signals or numerical display.

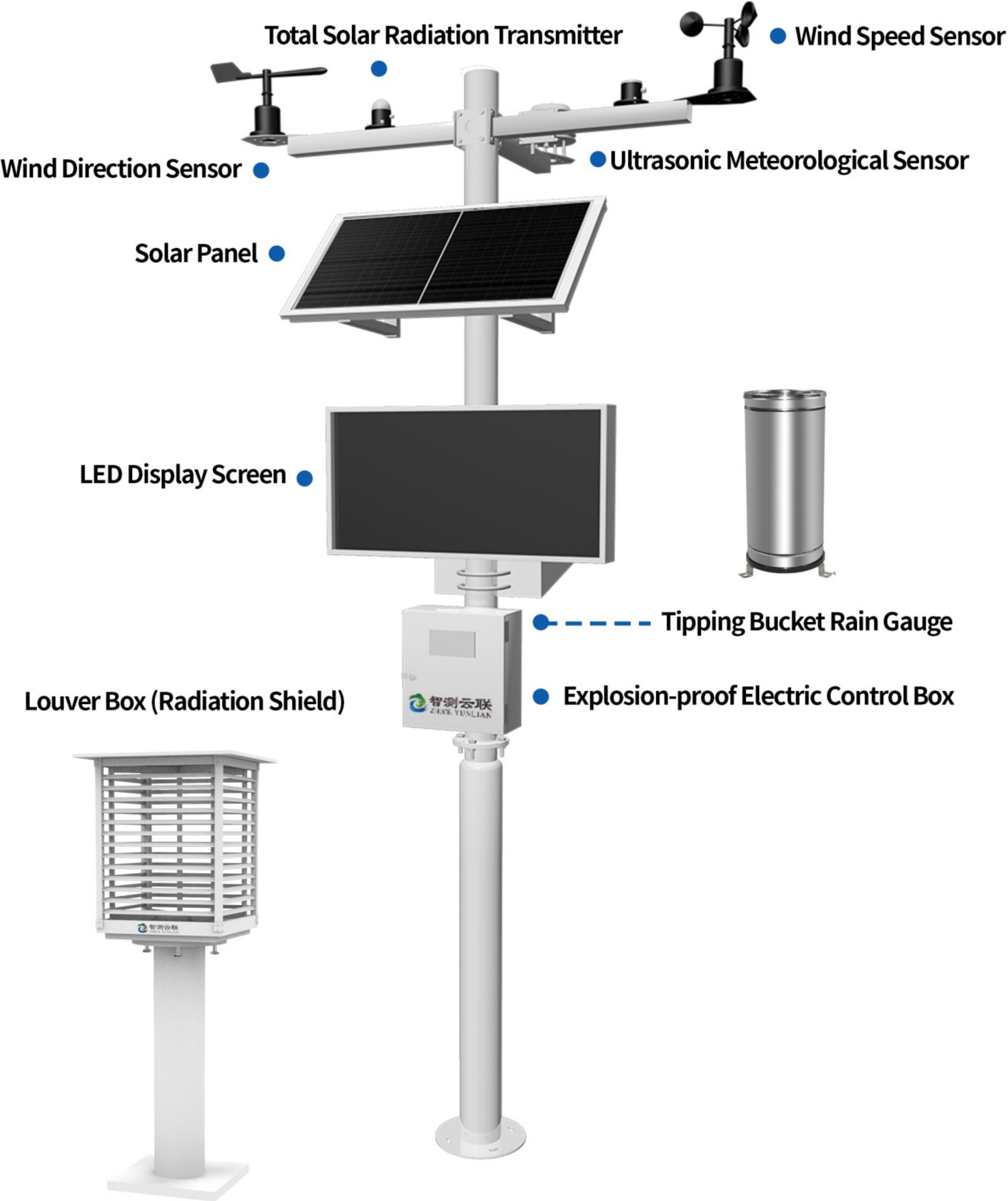
Scenarios

Greenhouse ventilation and farmland wind hazard early warning; daily wind speed recording at grassroots meteorological stations; basic wind monitoring at low-speed road sections and ports; wind environment data collection for small monitoring points.





 Product Description



Parameters

Technical Parameter	Specification
Operating Voltage	DC 12V
Output Signal	RS485 / 4-20mA / 0-5V / Pulse (frequency)
Measuring Range	0–70m/s
Starting Wind Speed	≤0.5m/s
Accuracy	± (0.3+0.03V) m/s
Surge Protection	EMC Class 3
Operating Temperature	-40°C ~ +70°C
Humidity	0%–95% (non-condensing)
Wind Resistance	>70m/s for 30min
Electrostatic Protection	15KV
Material	Aluminum alloy / polyester coating
Protection Grade	IP67

Description

The magnetic reed output generates an electrical signal linearly proportional to ambient wind speed. The device is equipped with built-in circuits for RF resistance, electromagnetic interference immunity and lightning surge protection. It is suitable for high-altitude work, construction machinery, port machinery and other scenarios.

The main structure is made of alloy material with surface treatment, featuring excellent waterproof and corrosion resistance. Both internal and rotating parts adopt a sealed design to effectively block water, salt spray and dust intrusion.

Features

- Non-contact magnetic sensing principle, high measurement accuracy and strong reliability
- Wide measuring range with low starting wind speed
- Compact design for easy installation
- Fault-tolerant circuit protection design
- Complies with CE EMC standards, multi-stage lightning and surge protection
- Multiple output modes available