

Wind Speed & Direction Sensor

Model: WS0002

Product Overview

The WS0002 is a combined wind speed and direction sensor featuring three-cup anemometer and directional vane. The sensor measures wind velocity and direction, transmitting data via RS485 Modbus RTU including wind speed, direction angle, and cardinal direction. The rugged aluminium construction is designed for long-term outdoor deployment in agricultural environments.



Applications

- Agricultural weather stations
- Spray drift risk assessment for pesticide application
- Frost fan and wind machine control
- Greenhouse ventilation management
- Evapotranspiration calculations
- Crop drying and harvest timing
- Livestock heat stress monitoring

Measurement Specifications		Electrical Specifications	
Wind Speed Range	0 - 45 m/s	Power Supply (Input)	9 - 24V DC
Wind Direction Range	0 - 360°	Signal Output	RS485
Start-up Wind Speed	Less than or equal to 0.3 m/s		

Environmental Specifications		Measurement Accuracy	
Operating Temperature	-30°C to +70°C	Wind Speed Accuracy	$\pm(0.3 + 0.03V)$ m/s (V = wind speed)
Operating Humidity	0% to 100% RH	Wind Direction Accuracy	$\pm 3^\circ$

Physical Specifications		Cable & Connection	
Housing Material	Aluminum Alloy	Cable Length	3 meters
Housing Dimensions	228 mm (dia) x 225 mm (H)	Connector Type	M12, 4 Pin Male A Code (PG9)
Ingress Protection	IP65		

Installation Notes

- Mount the sensor on a vertical pole at least 2 meters above surrounding obstacles
- Position away from buildings, trees, and structures that could cause turbulence
- Align the north marker on the sensor housing with true north for accurate direction readings
- Ensure the mounting pole is rigid to prevent vibration affecting measurements
- For agricultural applications, standard mounting height is 2-3 meters above crop canopy
- Route the cable through the mounting pole where possible to protect from UV and physical damage

Certifications & Compliance

CE | UKCA | RoHS



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